Contents

NUMBER 1, MARCH 1986

F. J. GORDON AND E. F. UNSWORTH. The effects of silage harvesting system and supplementation of silage-based diets by protein and methionine hydroxy analogue on the performance of lactating cows 1

E. L. JONES AND J. E. ROBERTS. Comparison of management techniques for evaluating Italian and hybrid ryegrass cultivars 9

C. S. MAYNE AND F. J. GORDON. The effect of harvesting system on nutrient losses during silage making. 1. Field losses 17

D. J. MOWAT AND S. JESS. The control of leatherjackets, *Tipula paludosa* Meig., in grassland by early application of insecticide 27

D. G. CHAMBERLAIN, P. C. THOMAS AND J. QUIG. Utilization of silage nitrogen in sheep and cows: amino acid composition of duodenal digesta and rumen microbes 31

R. W. J. STEEN. An evaluation of effluent from grass silage as a feed for beef cattle offered silage-based diets 39

D. J. MINSON AND R. A. BRAY. Voluntary intake and *in vivo* digestibility by sheep of five lines of *Cenchrus ciliaris* selected on the basis of preference rating 47

R. H. ARMSTRONG, T. G. COMMON AND H. K. SMITH. The voluntary intake and *in vivo* digestibility of herbage harvested from indigenous hill plant communities 53

D. R. SEALE, A. R. HENDERSON, K. O. PETTERSON AND J. F. LOWE. The effect of addition of sugar and inoculation with two commercial inoculants on the fermentation of lucerne silage in laboratory silos 61

D. J. ROBERTS AND J. D. LEAVER. Supplementary feeding of forage to grazing dairy cows. 3. The effect of three daytime stocking rates on the performance of cows offered grass silage overnight 71

Book Reviews 79

NUMBER 2, JUNE 1986

J. A. DOUGLAS. The production and utilization of lucerne in New Zealand (Review Paper) 81

H. DOVE AND H. A. MCCORMACK. Estimation of the ruminal degradation of forage rape after incubation in nylon bags in the rumen of sheep 129

R. D. SHELDRICK, R. H. LAVENDER AND V. J. TEWSON. The effects of frequency of defoliation, date of first cut and heading date of a perennial ryegrass companion on the yield, quality and persistence of diploid and tetraploid broad red clover 137

M. J. HAYES AND E. D. WILLIAMS. Some effects of fluid-sowing, pre-germination, irrigation and soil covering on the establishment and growth of seedlings of white clover slot-seeded into permanent pasture 151

B. S. LINZELL AND D. S. MADGE. Effects of pesticides and fertilizer on invertebrate populations of grass and wheat plots in Kent in relation to productivity and yield 159

A.-M. BAKER AND A. YOUNGER. The effect of temperature on the spring growth of perennial ryegrass at three contrasting sites (Research Note) 175

E. D. WILLIAMS. Further studies on the effect of phosphate fertilizer and propyzamide on the growth of white clover slot-seeded into permanent pasture (Research Note) 179

NUMBER 3, SEPTEMBER 1986

J. I. KEER, R. G. MCLAREN AND R. S. SWIFT. The sulphur status of intensive grassland sites in southern Scotland 183

P. J. GOODMAN AND M. COLLISON. Effect of three clover varieties on growth. ^{15}N uptake and fixation by ryegrass/white clover mixtures at three sites in Wales 191

P. D. PENNING, G. E. HOOPER AND T. T. TREACHER. The effect of herbage allowance on intake and performance of ewes suckling twin lambs 199

F. J. GORDON. The effect of system of silage harvesting and feeding on milk production 209

D. R. EVANS, T. A. WILLIAMS AND W. ELLIS DAVIES. Potential seed yield of white clover varieties 221

J. A. C. MEIJS. Concentrate supplementation of grazing dairy cows. 2. Effect of concentrate composition on herbage intake and milk production 229

A. HOPKINS. Botanical composition of permanent grassland in England and Wales in relation to soil, environment and management factors 237

M. J. GIBB AND M. S. RIDOUT. The fitting of frequency distributions to height measurements on grazed swards 247

J. KING, E. M. SIM AND G. T. BARTHRAM. A comparison of spectral reflectance and sward surface height measurements to estimate herbage mass and leaf area index in continuously stocked ryegrass pastures 251

P. J. L'HUILLIER, D. P. POPPI AND T. J. FRASER. Influence of structure and composition of ryegrass and prairie grass–white clover swards on the grazed horizon and diet harvested by sheep 259

N. BARTIAUX-THILL AND R. OGER. The indirect estimation of the digestibility in cattle of herbage from Belgian permanent pasture 269

H. A. ROBERTS. Persistence of seeds of some grass species in cultivated soil 273

Book Reviews 277

NUMBER 4, DECEMBER 1986

J. H. MCADAM. Growth and production of a *Cortaderia pilosa* (Gramineae) community in the Falkland Islands 281

D. MOORE AND R. O. CLEMENTS. Study of the population dynamics of dipterous stem-borer larvae of ryegrass swards under rotationally grazed or cut conditions 289

D. R. EVANS, T. A. THOMAS, T. A. WILLIAMS AND W. ELLIS DAVIES. Effect of fertilizers on the yield and chemical composition of pure sown clover and on soil nutrient status 295

C. J. DOYLE, M. S. RIDOUT, J. MORRISON AND C. EDWARDS. Predicting the response of perennial ryegrass to fertilizer nitrogen in relation to cutting interval, climate and soil. 303

R. K. M. HAY AND K. PEDERSEN. Influence of long photoperiods on the growth of timothy (*Phleum pratense* L.) varieties from different latitudes in northern Europe 311

D. SCOTT. Coefficients for the dry-weight rank method of botanical analysis of pasture 319

A. RANGELEY AND R. BOLTON. Lime and major nutrient fertilizers required to establish a perennial ryegrass/white clover pasture on a non-calcareous gley in the Scottish uplands 323

A-M. C. BAKER AND J. D. LEAVER. Effect of stocking rate in early season on dairy cow performance and sward characteristics 333

C. S. MAYNE AND F. J. GORDON. Effect of harvesting system on nutrient losses during silage making. 2. In-silo losses 341

L. G. LIACOS AND V. P. PAPANASTASIS. Organic and inorganic fertilization compared in a natural Mediterranean grassland 353

J. FRAME AND A. G. BOYD. Effect of cultivar and seed rate of perennial ryegrass and strategic fertilizer nitrogen on the productivity of grass/white clover swards 359

E. D. WILLIAMS AND M. J. HAYES. Growth of white clover in eight grass species and the effects of propyzamide, a grass-suppressing herbicide 367

D. R. FENLON. Growth of naturally occurring *Listeria* spp. in silage: a comparative study of laboratory and farm ensiled grass 375

Book Reviews 379

Author Index 385